

- 1 1. A method, comprising:
 - 2 receiving a request to change a relationship associated with a plurality of entities
 - 3 interacting within an industry;
 - 4 parsing the change request to identify a data structure associated with the industry, the
 - 5 data structure including a plurality of entity types and relationship types;
 - 6 based on at least some of the plurality of entity types and relationship types
 - 7 corresponding to the plurality of entities, identifying a sequence of transactions; and
 - 8 executing the transaction sequence to process the requested relationship change.
- 1 2. The method of claim 1, wherein the request corresponds to an electronic document
- 2 having a natural language format with a fixed context and a fixed grammar.
- 1 3. The method of claim 2, wherein the fixed grammar corresponds to a Backus-Naur format.
- 1 4. The method of claim 1, wherein the industry is a service-based industry and the entity
- 2 types corresponding to at least two of the plurality of entities correspond to at least two of a
- 3 service provider, a service implementer, a service purchaser, a service beneficiary, a service
- 4 maintainer, and a service regulator.
- 1 5. The method of claim 1, wherein the industry corresponds to a health care industry and the
- 2 entity types corresponding to at least two of the plurality of entities correspond at least two of a
- 3 health care subscriber, a health care provider, a health care practitioner, a health care beneficiary,
- 4 and a health care company.

1 6. The method of claim 5, wherein the request corresponds to at least one of a request for
2 payment of services performed, a request to authorize proposed services, a request to enroll the
3 health care provider, a request to enroll the health care subscriber, a request to enroll the health
4 care beneficiary, and an adoption of a new contract.

1 7. The method of claim 1, wherein the industry is a product-based industry and the entity
2 types corresponding to at least two of the plurality of entities correspond to at least two of a
3 product manufacturer, a product distributor, a product reseller, a product marketer, a product
4 seller, a product purchaser, a product maintainer, and a product regulator.

1 8. The method of claim 1, further comprising:
2 storing indicia associated with the change request in a first data structure; and
3 assigning a version number to the first data structure.

1 9. The method of claim 8, further comprising:
2 based, at least in part, on the version number of the first data structure, re-executing at
3 least some of the transaction sequence to reprocess the requested relationship change.

1 10. The method of claim 1, wherein the request is received from an electronic data
2 interchange system.

1 11. The method of claim 1, wherein the request is received from at least one of an application
2 program interface, a user interface, and a software editing tool.

1 12. The method of claim 1, wherein parsing the change request comprises:
2 parsing a natural language representation of the request into a plurality of fields; and

3 mapping at least some of the fields into at least one database table.

1 13. The method of claim 1, wherein the requested relationship change corresponds to at least
2 one contractual provision associated with the plurality of entities.

1 14. The method of claim 1, further comprising:
2 forming an electronic message in response to detecting an error during the execution of
3 the transaction sequence.

1 15. The method of claim 1, wherein indicia associated with the plurality of entities
2 correspond to a plurality of nodes in a semantic network and the requested relationship change
3 corresponds to at least one link interconnecting at least some of the plurality of nodes in the
4 semantic network.

1 16. The method of claim 15, further comprising:
2 querying the semantic network to obtain data associated with the plurality of entities and
3 the requested relationship change; and
4 formatting at least some of the obtained data in a natural language format exhibiting a
5 fixed context and a fixed grammar.

1 17. The method of claim 15, further comprising:
2 in response to the execution of at least part of the transaction sequence, forming an
3 instance of the semantic network.